| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|---|---|---|---|---|---|---|
| L1 | 340666 | antenna$1 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:20 |
| L2 | 1407 | 1 & (substrat$3 near12 (band bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 11:06 |
| L3 | 128 | 2 & (metal near5 plate$1) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:24 |
| L4 | 43 | 3 & propagat$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:24 |
| L5 | 14 | 4 & ((within) near12 (band bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:32 |
| L6 | 13 | 5 & first & second | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:33 |
| L7 | 9 | 5 & ((first & second) near7 antenna$1) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 11:04 |
| L8 | 9 | 7 & high$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:42 |

| | | | | | | |
|---|---|---|---|---|---|---|
| L9 | 1 | 8 & (bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:41 |
| L10 | 110 | 1 & (substrat$3 near12 (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:42 |
| L11 | 73 | 10 & (high$3 near5 frequenc$3) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 10:43 |
| L12 | 7 | 11 & ((first & second) near7 antenna$1) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:46 |
| L13 | 252 | 1 & (photonic near3 (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 11:04 |
| L14 | 62 | 13 & (substrat$3 near12 (band bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 11:04 |
| L15 | 12 | 14 & ((first & second) near7 antenna$1) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 11:06 |
| L16 | 5 | "6433756" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 11:06 |

| | | | | | | |
|---|---|---|---|---|---|---|
| L17 | 0 | 16 & (substrat$3 near12 (band bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 11:06 |
| L18 | 0 | 16 & (substrat$3 with (band bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 11:07 |
| L19 | 3 | 16 & (substrat$3 same (band bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:04 |
| L20 | 2 | "20050068233" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:04 |
| L21 | 2 | 20 & (conductor near3 plate) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:04 |
| L22 | 2 | 20 & (plate with rear) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:32 |
| L23 | 1 | 16 & helical | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:32 |
| L24 | 0 | 23 & (bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:46 |

| L25 | 6 | 10 & helical | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:44 |
|---|---|---|---|---|---|---|
| L26 | 8 | 2 & (hip (high near3 impedance near3 ground$3 near3 plane)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:45 |
| L27 | 6 | 26 & (bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:03 |
| L28 | 1 | 27 & ((first & second) near7 antenna$1) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:04 |
| L29 | 3 | 27 & (first & second) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:49 |
| L30 | 3 | 29 & electromagnetic | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:03 |
| L31 | 1 | 30 & (frequency with higher) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 12:50 |
| L32 | 3 | 30 & frequenc$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:04 |

| L33 | 53 | (daniel near2 sievenpiper).in. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:03 |
|---|---|---|---|---|---|---|
| L34 | 23 | 33 & (bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:03 |
| L35 | 19 | 34 & electromagnetic | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:03 |
| L36 | 19 | 35 & frequenc$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:04 |
| L37 | 4 | 36 & ((first & second) near7 antenna$1) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/08 13:05 |
| S1 | 323896 | antenna | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 11:59 |
| S2 | 51133 | S1 & (first near7 (antenna element$1)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:00 |
| S3 | 36428 | S2 & (second near7 (antenna element$1)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:01 |

| | | | | | | |
|---|---|---|---|---|---|---|
| S4 | 5070 | S3 & substrat$3 & ground$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:30 |
| S5 | 0 | S4 & (((first near7 (antenna element$1)) with (within near7 bandgap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:06 |
| S6 | 73 | S4 & (((first near7 (antenna element$1)) with (within near7 band)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:09 |
| S7 | 1 | S6 & (((second near7 (antenna element$1)) with (out near7 band)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:12 |
| S8 | 2 | S6 & (((second near7 (antenna element$1)) same (out near7 band)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:08 |
| S9 | 14 | S4 & (((second near7 (antenna element$1)) same (out near7 band)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:08 |
| S10 | 2 | S9 & (((first near7 (antenna element$1)) with (within near7 band)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:11 |
| S11 | 351 | S1 & (((first near7 (antenna element$1)) with (within near7 band)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:12 |

| S12 | 5 | S11 & ((second near7 (antenna element$1)) with (out near7 band)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:13 |
|------|------|------|------|------|------|------|
| S13 | 1422 | S4 & resonat$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:31 |
| S14 | 4 | S13 & (first with (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:18 |
| S15 | 4 | S13 & ((first & second) with (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:18 |
| S16 | 9 | S13 & ((first & second) same (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:16 |
| S17 | 140 | S1 & (first with (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:21 |
| S18 | 102 | S1 & ((first & second) with (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:18 |
| S19 | 0 | S1 & ((first & second) with within & (out adj of) & (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:19 |

| | | | | | | |
|---|---|---|---|---|---|---|
| S20 | 0 | S1 & ((first & second) with (within & (out adj of) & (bandgap (band adj gap)))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:20 |
| S21 | 0 | S1 & ((first & second) with (within & (out adj of) & (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:21 |
| S22 | 0 | S1 & (first & second) & (out adj of) & (band adj gap) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:21 |
| S23 | 692 | S1 & (first & second) & (band adj gap) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:21 |
| S24 | 102 | S23 & (first with (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:21 |
| S25 | 16 | S24 & resonat$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:22 |
| S26 | 6 | S25 & substrat$3 & ground$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:23 |
| S27 | 36389 | S1 & ((multipl$3 plurality) near9 frequency) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:24 |

| S28 | 39658 | S1 & ((multipl$3 plurality) near9 frequenc$3) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:31 |
|-----|-------|---------------------------------------------|------------------------------------------|----|-----|-------------------|
| S29 | 1043 | S28 & (first near20 within near5 band$3) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:26 |
| S30 | 5144 | S29 (second with (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:28 |
| S31 | 2 | S29 & (second with (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:29 |
| S32 | 102 | S1 & ((first & second) with (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:30 |
| S33 | 91 | S32 & (substrat$3 ground$3) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:31 |
| S34 | 18 | S33 & resonat$3 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:31 |
| S35 | 3 | S34 & ((multipl$3 plurality) near9 frequenc$3) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:33 |

| S36 | 150 | S4 & (bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:34 |
|---|---|---|---|---|---|---|
| S37 | 14 | S4 & (within near9 (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:36 |
| S38 | 14 | S36 & (within near9 (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 15:30 |
| S39 | 0 | S38 & ((out adj of) near9 (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 12:37 |
| S40 | 2 | "20040189544" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 15:59 |
| S41 | 5 | "6433756" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:00 |
| S42 | 2 | S41 & within & (bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:10 |
| S43 | 2 | S42 & propagat$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:15 |

| S44 | 323896 | antenna | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:15 |
|---|---|---|---|---|---|---|
| S45 | 21803 | S44 & (resonan$4 near12 frequency) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:46 |
| S46 | 254 | S45 & within & (bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:16 |
| S47 | 32 | S46 & (substrat$3 with (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:45 |
| S48 | 0 | S41 & pbg | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:30 |
| S49 | 20 | S46 & pbg | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:45 |
| S50 | 1483 | (tanaka near1 makoto).in. | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:37 |
| S51 | 7 | S50 & (tbg bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:45 |

| S52 | 1241 | S44 & (tbg bandgap (band adj gap)) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:45 |
|-----|------|------------------------------------|---------------------------------------------------|----|-----|-------------------|
| S53 | 118 | S52 & (substrat$3 with (bandgap (band adj gap))) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:45 |
| S54 | 36 | S53 & (resonan$4 near12 frequency) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:58 |
| S55 | 2 | "6518930" | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:53 |
| S56 | 31 | S53 & overlap$4 | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 16:58 |
| S57 | 3 | S53 & (frequency with overlap$4) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 17:02 |
| S58 | 7 | S52 & hip | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 17:09 |
| S59 | 0 | S42 & (out adj of) | US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/06/07 17:10 |

| S60 | 2 | S42 & out$3 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2005/06/07 17:16 |
|-----|---|-------------|--------------------------------------------------------------------|----|-----|------------------|
| S61 | 1 | S60 & prohibit$3 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2005/06/07 17:17 |
| S62 | 0 | S61 & S51 | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2005/06/07 17:17 |
| S63 | 0 | S61 & fig | US-PGPUB;<br>USPAT;<br>USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2005/06/08 10:18 |